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Crit Care Nurs Clin N Am 20 (2008) 23–29

CRITICAL CARE
NURSING CLINICS
OF NORTH AMERICA

The Synergy Model at Work in a Military ICU in Iraq

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While starting the American Association of Critical-Care Nurses (AACN) application process for the Acute and Critical Care Clinical Nurse Specialist (CCNS) examination, two unexpected hurdles occurred. First, the primary author (Lieutenant Colonel Freyling, who held the Army rank of Major (MAJ) during the occasion of this article) did not have all of the required 500 clinical hours in her master of science in nursing program and second, military orders arrived for her to deploy to Iraq. As an Army nurse who had a critical care background, she knew all things were possible even in the face of significant challenges. After a few phone calls, precepted clinical hours were arranged with an academic institution, and she was back on track to achieving her goal to become CCNS-certified, even if she was heading to Iraq.

Overview of the American Association of Critical Care Nurses synergy model

Along with the surprise of life in the desert, MAJ Freyling found that AACN's synergy model served her well as she started to work in a military ICU in Iraq (Fig. 1). It was clear to her that effective nursing practice, whether providing direct patient care in the United States or in an ICU in Iraq, is demonstrated when care is centered around the needs and characteristics of patients. AACN's Synergy Model for Patient Care values patient-centered care and demonstrates that positive patient outcomes are achieved when the competencies of the nurse and the characteristics of the patient are matched to meet the needs of the patient [1]. There are eight characteristics in the synergy model that are unique for patients who experience critical events (Table 1). There are also eight competencies in the synergy model that are essential for nurses to have when providing patient care (Table 2). Increasingly, the literature supports that when patient characteristics and nurse competencies are matched, opportunities for optimal patient outcomes are enhanced [2]. The synergy model also includes different levels of care required to meet the needs of the patients ranging from high (level 1) to minimal (level 5) and levels of competency ranging from competent (level 1) to expert (level 5). In addition, the model includes three spheres of influence: those derived through the nurse's influence with patients and families, nurses, and health care systems [3].

The synergy model may provide a helpful framework for the multifaceted role of the nurse taking care of acutely and critically ill patients in a military field hospital. MAJ Freyling found daily encounters of presenting patient characteristics and nurse competencies demonstrated throughout her military assignment working in the field ICU and transporting patients to a larger military facility. Although many components of the synergy model occur simultaneously, four are highlighted. First, advocacy and moral agency

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0899-5885/08/$ - see front matter. Published by Elsevier Inc.
doi:10.1016/j.ccell.2007.10.004

Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
2008		**00-00-2008 to 00-00-2008**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
The Synergy Model at Work in a Military ICU in Iraq	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Tripler Army Medical Center,Surgical Product Line,1 Jarrett White Road,Honolulu,HI,96859**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			
unclassified	**unclassified**	**unclassified**	**Same as Report (SAR)**	**7**	

Fig. 1. Forward Surgical Team, ICU Section, in Iraq.

(a nurse competency) and vulnerability (a patient characteristic) are described for the care of an Arab female child with 45% burns from an improvised explosive device (IED) thrown into her front door. Then, diversity (a nurse competency denoting the ability to recognize the individuality of patients) [1], participation in care (a patient characteristic denoting engagement in aspects of care) [1], and resiliency (a patient characteristic denoting the ability to return to a prior level of functioning) [1] are described for the care of an Arab female who had traumatic brain injury from a vehicle-borne IED. These two cases demonstrate how characteristics fluctuate with a patient's condition and how nurse competencies, when linked synergistically, can improve the outcomes for patients requiring critical care in a military ICU in Iraq.

Advocacy and moral agency: snapshot of competency in a military ICU in Iraq

Advocacy and moral agency is a nurse competency that can be defined as acting on the behalf of another to ensure that person's best interests are considered [1,4]. Several patient characteristics profit from the application of this competency. One that consistently manifested during MAJ Freyling's assignment was the patient characteristic of vulnerability, or the susceptibility to stressors that may affect outcomes adversely [1,3]. Most trauma patients are vulnerable, as trauma is a stressor known to adversely affect outcomes. Complicate the stress of trauma with patients who are chemically paralyzed, sedated, in severe pain, or even comatose, and this alters their ability to participate in care and decision making [5]; thus there is a requirement of a higher level of competency for advocacy and moral agency by the nurse.

Vulnerability of Iraqi patients, in particular, also includes a language barrier. The inability to participate in care and decision making in the case of Iraqi patients is compounded by this communication deficit, and this can result in disjointed care [5]. An important role of the CCNS is to establish an environment that promotes ethical decision making and patient advocacy. Role modeling has been demonstrated as an effective strategy for such CCNS competencies as patient advocacy [5].

This skill of role modeling was put to the test while providing care to a 2-year-old Iraqi patient named "Marta." Marta suffered 45% full thickness burns to her lower back, buttocks, and both legs when an IED was thrown through the doorway of her home as her mother answered the door. Marta's mother and 2-month-old sister also were burned in the blast. They both made complete recoveries, but Marta had to stay in the ICU for extensive dressing changes and skin grafts. Unfortunately, her condition worsened, and she eventually was placed on the ventilator

Table 1
American Association of Critical-Care Nurses synergy model—patient characteristics

Characteristic	Definition	Level of characteristic	Case study level
Complexity	Entanglement of two or more issues/systems (family, treatment therapy)	Level 1—highly complex (complex patient/family dynamics) Level 3—moderately complex Level 5—minimally complex (straightforward, routine)	Marta = 1 Hoda = 1
Participation in decision making	Engagement of the patient/family in care decisions	Level 1—minimal participation (lack capacity/desire) Level 3—moderate participation Level 5—high participation (actively engaged, full involvement)	Marta = 1 Hoda = 5
Participation in care	Engagement of the patient/family in aspects of care	Level 1—minimal participation (lack capacity/desire) Level 3—moderate participation Level 5—high participation (actively engaged, full involvement)	Marta = 1 Hoda = 3
Predictability	Ability to expect a certain course of events/illness	Level 1—minimally predictable (uncertainty, rare) Level 3—moderately predictable Level 5—highly predictable (expected, common)	Marta = 1 Hoda = 1
Resiliency	Ability to return to a prior level of functioning through the use of coping or compensatory mechanisms	Level 1—minimally resilient (brittle, low reserve capacity) Level 3—moderately resilient Level 5—highly resilient (possess endurance, high reserve capacity)	Marta = 1 Hoda = 1
Resource availability	Extent to which resources are present in a situation (financial, psychological, social, and others)	Level 1—minimal resources (lack social/psychological support) Level 3—moderate resources Level 5—many resources (knowledgeable, strong social/psychological support)	Marta = 1 Hoda = 3
Stability	Ability to maintain a state of equilibrium, responsiveness to therapy	Level 1—minimally stable (labile) Level 3—moderately stable Level 5—highly stable (constant)	Marta = 1 Hoda = 3
Vulnerability	Extent of susceptibility to actual or potential stressors	Level 1—highly vulnerable (unprotected, fragile) Level 3—moderately vulnerable Level 5—minimally vulnerable (safe, able to protect against threats)	Marta = 1 Hoda = 3

From American Association of Critical-Care Nurses. The AACN synergy model for patient care. Available at: http://www.certcorp.org. Accessed April 30, 2007; with permission.

and unable to talk. Her family, especially her father, was at her bedside daily.

Unfortunately, because of an increased threat of a base attack corresponding to the upcoming Easter holiday, all hospital visitations for Iraqi patients were stopped. This was the first day Marta's father could not visit. Ventilated and unable to talk, Marta became restless with an increased heart rate, fever, and decreased blood pressure. As their eyes met, MAJ Freyling rubbed Marta's arm and softly told her it would be okay. Although Marta was not able to understand English, that touch crossed the language barrier and provided comfort in the absence of her father.

After a long period of unsuccessful attempts to treat her refractory hypotension and poor

Table 2
American Association of Critical-Care Nurses synergy model—nurse competencies

Competency	Definition	Level of competency	Case study level
Advocacy and moral agency	Works on another's behalf; represents the concerns of patients and families; serves as a moral agent to resolve ethical and clinical issues	Level 1—works on behalf of patient, patient values congruent with own values Level 3—works on behalf of patient and family, patient values may be different from own Level 5—works on behalf of patient, family, and community; uses internal/external resources	Marta = 5 Hoda = 3
Caring practices	Interventions and behaviors creating a therapeutic environment promoting comfort, healing, and compassion	Level 1—focuses on basic needs according to standards/protocols Level 3—recognizes subtle changes in patient needs; attempts to tailor care to the patient Level 5—interprets needs of patient and family; fully engaged	Marta = 5 Hoda = 5
Clinical inquiry	Ongoing process of questioning and evaluating practice; incorporates research utilization and experiential learning	Level 1—follows current standards/guidelines; recognizes need for learning Level 3—questions current policies/guidelines; compares/contrasts alternatives Level 5—improves or individualizes policies/guidelines; performs literature review/research to make changes in current practice	Marta = 3 Hoda = 3
Clinical judgment	Clinical reasoning used to deliver care, integrating knowledge and critical thinking to form clinical decisions	Level 1—collects and interprets basic data; adheres to protocols/algorithms Level 3—collects and interprets complex data, comfortable deviating from protocols/algorithms when necessary Level 5—collects and interprets multiple or conflicting data, anticipates problems based on past experience, delegates and collaborates with multidisciplinary team	Marta = 3 Hoda = 3

(*continued on next page*)

Table 2 (*continued*)

Competency	Definition	Level of competency	Case study level
Collaboration	Working with the patient/family and other members of the multidisciplinary team to promote optimal patient outcomes	Level 1—minimally collaborative, limited involvement of others Level 3—moderately collaborative Level 5—highly collaborative, all-inclusive	Marta = 3 Hoda = 5
Facilitation in learning	Promotes learning for patients/families, staff, and the community both formally and informally; considers the educational level and the strengths or weaknesses of learners	Level 1—follows planned education strategies; learner is passive Level 3—may incorporate varied teaching methods, considers the patient's needs Level 5—develops educational plan with patient/family in collaboration with the multidisciplinary team; learner is active	Marta = 3 Hoda = 3
Response to diversity	Ability to recognize, appreciate, and incorporate patient differences into the plan of care; recognizing the individuality of patients	Level 1—assesses diversity through a standard questionnaire, adheres to own belief system Level 3—considers the individuality of the patient, inquires about differences Level 5—actively responds to, anticipates, and integrates differences into the plan of care	Marta = 3 Hoda = 5
Systems thinking	Ability to recognize the interconnected nature of a healthcare system, using a global perspective in clinical decision-making	Level 1—functions as the key resource for patients/family, narrow view of resources Level 3—moderate ability to recognize and react to patient/family needs as they move through a healthcare system, may use negotiation to obtain necessary resources Level 5—holistic perspective, expertly navigates through the system effectively to ensure safe passage	Marta = 3 Hoda = 3

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ventilation and oxygenation, Marta died. Just as in the United States, advocating for family presence during end of life would have been part of the standard of patient care. The threat of a base attack, however, was too much of a risk for the base and for the family. Her family recognized that compassionate and caring practices were provided for Marta, especially when the staff intervened on her behalf with a long-standing cultural tradition. In Iraq, it is traditional to bury

the dead within 24 hours [6]. The inability of her family to participate in care and decision making in Marta's final moments gave her nurse the opportunity to be her voice. Even though there was heightened security, the hospital staff made special arrangements for Marta's father and uncle to claim her body immediately so that they could uphold the tradition of burying her within 24 hours. Advocating for spiritual beliefs in the face of danger was the right thing to do to influence the sphere of care for this patient and her family.

Diversity: snapshot of competency in a military ICU in Iraq

Response to diversity is a necessary nurse competency to achieve improved outcomes, especially for the Iraqi patient population. Being skilled at diversity means that an individual is able to recognize, appreciate, and incorporate differences into the provision of care [1,4]. In light of the significant cultural differences associated with the treatment of Arab women, mastering the competency of diversity was particularly important during this assignment in Iraq.

The most notable symbol of the status of Arab women is the covering of the hair in public with a veil that drapes around the head and neck and low on the forehead (and for some from the neck to the ankles) [6]. According to the Cultural Orientation Project, the root of the treatment of Arab women lies in the basic belief of a man's honor to family and the belief that men and women are unable or unwilling to control physical urges. It is also reported that Arab women are seen as dominated and repressed. Conversely, protection of women, by covering their bodies and not allowing them to make eye contact with other men, is seen by Arab women as evidence that they are loved and valued. Interestingly, some Arab women view Western freedoms as evidence of neglect and immorality [6].

Human rights abuse in Iraq was another cultural teaching of which MAJ Freyling became aware. Abuse in Iraq has been defined as torture, killings, disappearances, forced conscription, beatings, kidnappings, being held hostage, and ear amputations [7]. One study of 1991 households revealed that 82% of women had to obtain permission from a husband or male relative to access health care. Half of the men and women surveyed agreed there were reasons to restrict women's educational and employment opportunities and that a man had a right to beat his wife if she did not obey him [7]. In addition, an Arab woman, whose family believes in honor killings, incurs the risk of death when damaging the family reputation by having sex with a man, dating a man, or even having her body seen by a man. This dishonor allows a male family member to murder the offending woman without repercussions [7]. This proved to be a major cultural concern in the care of a 17-year-old Arab female the authors will call "Hoda."

Hoda suffered a traumatic brain injury from an IED that was set off in front of her uncle's home in an effort to kill him. Shrapnel from the device entered Hoda's right frontal lobe and literally sliced through her brain, lodging in the occipital lobe. It was during her care that one could fully appreciate the synergistic relationship between linking the nurse competency of diversity and the patient characteristic of participation in care, and the engagement of the patient/family in aspects of care.

The nurses were told that Hoda was studying to be a teacher and that she came to the emergency room talking in English, despite the fact that brain matter was exposed. When MAJ Freyling began taking care of Hoda, it was postoperative day 1 for her. She had an intracranial pressure monitor, a ventriculostomy, ventilator support by means of an endotracheal tube, and was receiving sedation and analgesia intravenously. During rounds, the surgeons stated there was a good chance that Hoda would be killed once she returned home, as she did not have the customary male family member as an escort during her care to ensure she was not exposed to other males in the unit. Nurses began to make extra efforts to keep Hoda from exposure in the open bay area, as she was the only female in the ICU. They noticed that despite her sedation level, she often vigorously resisted any attempts at examining her abdomen and providing Foley catheter care. Enlisting the help of fellow nurses, a blanket wall was created around her bed while providing such care, and time was spent reassuring Hoda that she could not be seen by anyone. She kept her eyes closed most of the time.

Hoda's male cousin came to visit her on postoperative day 2. He cried when he saw her and expressed an emotional thank you to the nurses for caring for her. He said: "Put her in your heart the way I have put her in mine." MAJ Freyling assured him she would, and then she had the interpreter ask if there was anything special that should be done for Hoda. He said to keep her

covered as much as possible and that her head should be covered when the rest of the family visited. MAJ Freyling told him she would ensure Hoda was covered, and that she would have a female nurse with her as much as possible. His responses led MAJ Freyling to believe that he was not so strict that he would recommend an honor killing for Hoda, but he may have had concerns about other family members. After weaning Hoda from the ventilator and having her begin to get up into a bedside chair, the ICU staff agreed to move her into another ICU, where, because of low census, they could wall off part of the ICU just for her. This gave Hoda privacy and took her away from the other male patients. Once she was ambulatory, Hoda began wearing her traditional veil while moving about the hospital with the physical therapist. Hoda's resiliency was amazing.

The CCNS is responsible for responding to diversity and ensuring patient and family needs are met, even when the needs are unusual to the health care staff [8]. In today's world, diversity exists in all areas. When working in a foreign land, however, response to diversity is a necessary nursing characteristic and key to improving patient outcomes. By applying the synergy model, MAJ Freyling was able to respond to the diversity of Hoda and her family by utilizing skills that included seeking information about her culture, working through the cultural differences, and tailoring the delivery of care to meet the diverse needs of her family.

Summary

According to the synergy model, when patient characteristics and nurse competencies match, patient outcomes are optimized. The synergy model delineates three levels of outcomes: those derived from the patient, those derived from the nurse, and those derived from the health care system. A goal of nursing is to restore a patient to an optimal level of wellness as defined by patients and their families. The nurse characteristics can be considered competencies that are essential for those providing care to the critically ill. Whether applied in critical care settings in the United States or in Iraq, the synergy model provides an ideal framework to optimize positive outcomes for patients. The care of patients in Iraq can be complex and requires a competent skill set to help promote optimal outcomes. Both Marta and Hoda had conditions decreasing in stability and increasing in complexity (see Tables 1 and 2). At various points, both were no longer predictable in their continuum of care; resiliency was questionable, and vulnerability was high. Hoda had family support to help guide the decisions being made in her care; however, Marta was dependent on United States military health care providers to guide her plan of care at the end of life. In caring for these two challenging patients, MAJ Freyling was able to utilize all eight nursing competencies to reflect an integration of her knowledge, skills, and experience. The synergy model provided her with a framework upon which to base her practice.

Acknowledgements

The opportunity to complete course requirements to be eligible for the CCNS examination was made possible by Carol Hartigan, RN, MSN, Director of the AACN Certification Corporation, the AACN Scholarship Fund, and faculty at the Acute and Critical Care Clinical Nurse Specialist Program at Georgetown University School of Nursing & Health Studies.

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